REMARKS

Claims 1-28 were pending in this application.

Claims 1, 10, 15, and 24 have been rejected.

Claims 2-9, 11-14, 16-23, and 25-28 have been objected to.

Claims 6 and 20 have been amended as shown above.

Claims 1-28 remain pending in this application.

Reconsideration and full allowance of Claims 1-28 are respectfully requested.

I. ALLOWABLE CLAIMS

The Applicant thanks the Examiner for the indication that Claims 2-9, 11-14, 16-23, and 25-28 would be allowable if rewritten in independent form to incorporate the elements of their respective base claims and any intervening claims. Because the Applicant believes that the remaining claims in this application are allowable, the Applicant has not rewritten Claims 2-9, 11-14, 16-23, and 25-28 in independent form.

II. AMENDMENTS TO CLAIMS

The Applicant has amended Claims 6 and 20 to correct an informality in the claims. In particular, the Applicant has amended Claims 6 and 20 so the claims refer to "J" and "J+1", which are used to define two non-overlapping ranges.

III. REJECTION UNDER 35 U.S.C. § 102

The Office Action rejects Claim 1 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,339,050 to Llewellyn ("*Llewellyn*"). This rejection is respectfully traversed.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. MPEP § 2131; *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). Anticipation is only shown where each and every limitation of the claimed invention is found in a single prior art reference. MPEP § 2131; *In re Donohue*, 766 F.2d 531, 534, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985).

Claim 1 recites a "loop response control circuit" capable of adjusting a value of a charge pump current (Ic) based at least partially on at least one of a "range in which [a] first divider value lies" and a "range in which [a] second divider value lies." *Llewellyn* fails to anticipate these elements of Claim 1.

Llewellyn recites a phase locked loop (PLL) frequency synthesizer. (*Abstract*). The PLL frequency synthesizer includes a feedback divider (element 206), which has a "division factor M." (*Col. 5, Lines 15-19*). The PLL frequency synthesizer also includes a feedforward divider (element 202), which has a "division factor N." (*Col. 5, Lines 15-19*). *Llewellyn* recites that the division factor M could have an "operational range" of "256:1 or greater." (*Col. 2, Lines 50-52*). *Llewellyn* adjusts a current using the division factor M, the division factor N, or both. (*Col. 4, Line 3 – Col. 5, Line 45*).

The Office Action asserts that the division factor M of *Llewellyn* "does have an

operational range and thus the pump current must be adjusted as the loop goes through coarse tuning and fine tuning with the values for M changing to allow for the desired locking to occur." (*Office Action, Page 3, First paragraph*). The Office Action also asserts that the "operational range" of the division factor M is used in *Llewellyn* when the charge pump current is based on both division factors N and M. (*Office Action, Page 5, Paragraph 5*). The Applicant respectfully traverses these assertions.

First, *Llewellyn* recites that the division factor M could have an "operational range" of 256:1 or greater. This simply identifies the division factor that may be assigned to the feedback divider. This portion of *Llewellyn* contains absolutely no mention of adjusting a current based on whether the division factor M lies within a given range.

Second, *Llewellyn* recites that a current may be adjusted based on one or more division factors N and M. In particular, *Llewellyn* recites that the current may be adjusted based on the actual value of the division factor M. While the value of the division factor M may change, *Llewellyn* continues to use the actual value of the division factor M to adjust the current. *Llewellyn* contains no mention of adjusting a charge pump current based on a "range" in which a divider value "lies" as recited in Claim 1.

Third, *Llewellyn* contains no mention of performing "coarse tuning" and "fine tuning" in the phase locked loop. The Office Action does not identify any portion of *Llewellyn* supporting its assertion that the "pump current must be adjusted as the loop goes through coarse tuning and fine tuning."

For these reasons, the Office Action has not shown that *Llewellyn* anticipates the

Applicant's invention as recited in Claim 1. Accordingly, the Applicant respectfully requests withdrawal of the § 102 rejection and full allowance of Claim 1.

IV. REJECTION UNDER 35 U.S.C. § 103

The Office Action rejects Claims 10, 15, and 24 under 35 U.S.C. § 103(a) as being unpatentable over *Llewellyn* in view of U.S. Patent No. 5,420,545 to Davis et al. ("*Davis*"). This rejection is respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. MPEP § 2142; *In re Fritch*, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984). Only when a *prima facie* case of obviousness is established does the burden shift to the applicant to produce evidence of nonobviousness. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985).

A *prima facie* case of obviousness is established when the teachings of the prior art itself

suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. MPEP § 2142.

As described above in Section III, Claim 1 is patentable. As a result, Claim 10 is patentable due to its dependence from an allowable base claim.

Claim 15 recites a "loop response control circuit" that is capable of adjusting a value of a charge pump current "based at least partially on at least one of a range in which [a] first divider value lies and a range in which [a] second divider value lies." As described above in Section III, the Office Action does not show that *Llewellyn* discloses, teaches, or suggests these elements of Claim 15. The Office Action also does not show that *Davis* discloses, teaches, or suggests these elements of Claim 15. As a result, the Office Action has not shown that the proposed *Llewellyn–Davis* combination discloses, teaches, or suggests all elements of Claim 15.

For these reasons, the Office Action has not established a *prima facie* case of obviousness against Claim 15 (and Claim 24 depending from Claim 15).

Accordingly, the Applicant respectfully requests withdrawal of the § 103 rejection and

full allowance of Claims 10, 15, and 24.

V. CONCLUSION

As a result of the foregoing, the Applicant asserts that the remaining claims in the application are in condition for allowance and respectfully requests an early allowance of such claims.

SUMMARY

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at ***wmunck@davismunck.com***.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Davis Munck, P.C. Deposit Account No. 50-0208.

Respectfully submitted,

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